



Control Number: 51871



Item Number: 12

Addendum StartPage: 0

PROJECT NO. 51871

REVIEW OF THE ERCOT  
SCARCITY PRICING  
MECHANISM

§  
§  
§

PUBLIC UTILITY COMMISSION  
OF  
TEXAS

2021 MAR 19 PM 2:51  
FILED  
MAR 19 2021  
FEBRUARY 2021

**TEXAS INDUSTRIAL ENERGY CONSUMERS' INITIAL COMMENTS**  
**ON THE LOW SYSTEM-WIDE OFFER CAP**

**I. INTRODUCTION**

Texas Industrial Energy Consumers (TIEC) appreciates the opportunity to provide feedback on potential modifications to the ERCOT scarcity pricing mechanism in the wake of February's winter storm event.

TIEC has consistently advocated for scarcity pricing based on sound economic principles, including setting wholesale prices at or near the Value of Lost Load (VOLL) during events that reflect a shortage of *installed capacity*. The current high system-wide offer cap (HCAP) provides strong investment incentives, primarily by encouraging customers and load-serving entities to buy power forward at premium prices to hedge risk and avoid high real-time exposure. It also rewards operational performance during scarcity events. This structure has worked well during the summer peaks, concentrating high prices across high demand periods and maximizing the market's ability to mitigate exposure to those prices through hedging and/or behavioral response.<sup>1</sup>

As the Commission's questions in this project acknowledge, the concept of a "circuit breaker" has always been a feature of the ERCOT market design, although its design and application has never been tested until recently. Last month's winter storm demonstrated that the existing low system-wide offer cap (LCAP) is not appropriately designed to address a sustained operational event. In particular, the LCAP calculation of "50 times a natural gas price index selected by ERCOT" would have resulted in absurd outcomes due to gas pricing and availability during the February freeze. As this recent event showed, there may be instances where the market cannot "behave its way out" of an event due to forces outside market participants' reasonable control, regardless of price incentives. Many reliability events—including the recent winter

---

<sup>1</sup> As the Commission is aware, TIEC did not support the Operating Reserve Demand Curve consolidation into a single or 0.25 standard deviation "shifts" that result in higher prices occurring sooner, and lasting longer, than economic principles would otherwise support.

event—are driven primarily by *operational issues*, rather than a shortage of *installed capacity* in Texas. In these situations, continuing to send price signals at \$9,000/MWH may not elicit meaningful additional behavioral response, and may not meaningfully encourage long-term investment. Even beyond this recent experience, TIEC has long had concerns about the design feature that would keep the LCAP in place for the remainder of the year once a certain Peaker Net Margin (PNM) threshold is reached. It is important to maintain performance incentives during typical capacity-driven scarcity events—when market participants are generally not constrained in their ability to respond—to ensure maximum reliability. TIEC has concerns about going into the summer without these incentives intact.

Importantly, one of the key purposes of scarcity pricing is to incentivize long-term resource adequacy, so scarcity pricing should be aligned with events that are likely to generate forward hedging and future investment. Sporadic operational events like the recent winter storm do not provide the same investment incentives because they are irregular, unpredictable, and are not driven by an overall shortage in *installed generation*.<sup>2</sup> Sending high price signals for an extended period of time in these scenarios is unlikely to incentivize additional investment and may compromise the financial integrity of the market. As we saw during the winter freeze event, not only are customers harmed by applying scarcity pricing for multiple days during a “black swan” operational event, but other market participants who did not perform due to factors largely beyond their control—including generation owners and public power entities—were also significantly harmed. If applying the HCAP during operational events is not meaningfully contributing to short-term reliability or long-term resource adequacy, it may not be appropriate to continue sending scarcity pricing signals for the duration of such an event.

For these reasons, TIEC recommends that the Commission consider eliminating the current LCAP formulation and replacing it with an event-specific circuit breaker to achieve the following objectives:

- (a) Reduce maximum prices during sustained operational events, when a substantial portion of the market is unable to respond to pricing incentives due to an identifiable

---

<sup>2</sup> TIEC acknowledges that some projections indicated a potential capacity shortage for certain hours, factoring in expected wind and solar output. Scarcity pricing might have been appropriate for those hours, but the majority of the event was a result of widespread operational issues, including mass forced outages and derates across the generation fleet.

event that is beyond market participants' control. TIEC is open to discussion on the price level but believes an LCAP of \$2,000/MWh could be a reasonable number.

- (b) Ensure that no generation operates at a loss during this period by transitioning to the LCAP after a certain period of time, and then providing generators an opportunity to prove up their verifiable costs, akin to the "cost plus" settlement process that occurs for Reliability Unit Commitment (RUC) or Reliability Must Run (RMR) units.
- (c) Maintain reasonable price signals to encourage price-based response and limit uplift to the extent possible. TIEC believes this would likely be achieved at the \$2,000/MWh level. This proposed LCAP is above the current RUC offer floor of \$1,500/MWh, which was specifically designed to be above most generators' marginal cost of operating. As a result, under normal circumstances most generators' actual costs should be recovered at this level, minimizing potential uplift
- (d) Restore the default scarcity pricing regime once the event is over. This preserves market performance incentives and improves reliability for capacity-driven scarcity throughout the year.

Importantly, TIEC does not believe that this circuit breaker feature is appropriate during a capacity-driven scarcity event, like a long hot summer. As we have seen since 2011, even when relatively low reserve margins were projected, the market's response to scarcity pricing has provided a high level of reliability and resource adequacy without the need for an LCAP or other "circuit breaker." This response has included adding distributed resources and price-responsive demand, which has significantly contributed to reliability over peak periods. In line with its commitment to competitive markets, the Commission should adopt stringent standards for activating this event-based LCAP and should only invoke the circuit breaker when it has become clear that external forces are substantially impeding typical behavioral response, creating sustained "operational" scarcity.<sup>3</sup>

While TIEC believes further discussions may be needed on the appropriate trigger, a revised, event-specific LCAP could potentially be implemented when ERCOT has been in an

---

<sup>3</sup> An operational event triggering this revised LCAP concept could occur during the summer months, but it would have to be driven by some external factor, not just seasonal weather.

Energy Emergency Alert (EEA) Level 3 for more than 10 hours over any 48-hour period, and when there is an identifiable disruption preventing typical market response and creating operational issues. This ten-hour threshold will incentivize generators to show up during a crisis by allowing several hours of pricing at or near the HCAP, while providing a circuit breaker to preserve the integrity of the market during natural disasters, storms, system attacks, other catastrophes, widespread supply chain failures, or similar operational events.

TIEC believes that an event-based LCAP, as described above, would likely eliminate the need for a PNM-based LCAP altogether, although both could be retained if the Commission desires. As noted above, PNM has always been an imperfect measure of when the market has sufficiently incentivized long-term resource adequacy in a given year, particularly since 80-90% of wholesale market transactions are not part of ERCOT's real-time market. Switching to the LCAP early in the year may also impede performance incentives during the summer and other critical periods. For these reasons, TIEC questions whether the LCAP should remain in effect going into this summer. However, if the Commission retains the current PNM-trigger, an event-based LCAP would reduce PNM associated with extreme "one-off" events when market response is constrained, making it unlikely that the PNM threshold would be met as a result of an extreme event like the February freeze. As a result, these two constructs could theoretically co-exist.

## **II. RESPONSES TO THE COMMISSION'S QUESTIONS**

### **Question 1. Should the Commission amend its rules to adjust the LCAP?**

The Commission should consider eliminating the current LCAP and replacing it with an event-based circuit breaker as discussed above.

The existing LCAP has several flaws. First, as TIEC has observed in the past, PNM is not a meaningful metric because it measures revenues based solely on real-time prices. This represents only a small portion of financial activity for a given operating day. PNM does not capture, for example, day-ahead market revenues, or revenues from other bilateral or forward transactions. The *risk* of high prices causes retail electric providers, generators, and end-use customers to contract forward at a risk premium, regardless of whether those prices ever materialize. Generators have indicated that this behavior is the most meaningful contributor to their revenues, and it is not reflected in real-time prices or, correspondingly, PNM calculations. As a result PNM, and by

extension the LCAP, is not a good indicator of when the market has provided sufficient revenue to motivate investment over a given period.

Second, as demonstrated during the February freeze, the current LCAP formulation does not work well during a prolonged operational event when the market cannot “behave its way out,” particularly if there are fuel or other supply chain dislocations. Due to gas prices during the February event, setting the LCAP at “the higher of” \$2,000 or 50x natural gas prices would have actually *increased* prices far above the HCAP. This does not make sense. As noted above, continuing to send scarcity signals during events that are driven by operational failures—rather than a capacity shortage—does not incentivize long-term investment or meaningfully contribute to resource adequacy, and is not economically justified.

Third, TIEC has long been concerned about the consequences of reaching the PNM threshold early in the year and going into the summer with the LCAP in place. This would be the situation for 2021 if the current LCAP construct is preserved. When behavioral response is unconstrained, the HCAP creates strong performance and hedging incentives that have resulted in a high level of reliability during tight summer periods. ERCOT is widely known as having some of the lowest summer forced outage rates in the country due to these strong pricing incentives. Applying the LCAP during these peak hours, which *do* contribute to investment decisions, could compromise performance incentives and degrade reliability. A temporary, event-based LCAP, as TIEC proposes, would provide relief to the market during sustained operational events, but would retain important scarcity pricing incentives for capacity events.

**Question 2. If the Commission amends its rules to adjust the LCAP, what specific adjustments should it make?**

As described above, the commission should consider replacing the current LCAP with an event-based “circuit breaker” that would address sustained operational events. TIEC has attached language to implement this as a replacement to the current PUC Subst. R. 25.505(g), but is open to refining this proposal with input from other stakeholders.

Again, events like the February freeze are *operational* events that are not driven by a capacity shortage. Potential scarcity pricing during unpredictable operational events, such as a winter storm, do not meaningfully impact long-term investment decisions. Investors look to market fundamentals and assess the likelihood of earning premiums for periods when *capacity* is

short. The February freeze made clear that allowing the HCAP to remain in effect when the market at large cannot “behave its way out” of a situation due to external factors harms all market sectors. Once it is clear that high prices are not eliciting additional operational response, there is no reason to continue to set prices at VOLL for days on end. Customers, REPs, generators, and non-opt-in-entities (NOIEs) would all benefit from having an event-based LCAP in place during an event such as the recent winter storm.

It is important to note that suspending ERCOT’s scarcity pricing regime is an extraordinary step that should not be taken often, or lightly. As a starting point, TIEC believes the Commission should consider implementing an event-based LCAP when ERCOT has been in Energy Emergency Alert (EEA) Level 3 for more than ten hours in any 48-hour period, *and* when there are one or more identifiable external factors preventing a substantial portion of the market from responding. This two-part test would ensure that the LCAP is only implemented during events like a natural disaster, major storm or other catastrophe, widespread fuel or other supply chain failures, physical or cyber attacks, or similar scenarios.<sup>4</sup> TIEC’s proposal would allow prices to remain at or near the cap for at least ten hours before the LCAP is invoked, limiting undue market interference and giving the market an opportunity to address the issue before there is any pricing intervention. Before last month, ERCOT had *never* had ten hours of EEA Level 3 (or its

---

<sup>4</sup> Note again that this could happen in the summer, but there would have to be some unique operational event (not just sustained high prices due to seasonal weather).

equivalent<sup>5</sup>) over a 48-hour period, even during prior winter storms that forced ERCOT to implement firm load shed.<sup>6</sup>

TIEC's proposal would maintain prices at a level that exceeds most generators' marginal operating cost under typical circumstances, but would also provide a safety valve to ensure resources do not operate at a loss. The current Reliability Unit Commitment (RUC) process sets an offer floor at \$1,500/MWh, which was selected to put RUC units behind other market units in the dispatch order. This indicates that preserving the current \$2,000/MWh price is likely to cover the operating costs of most of the market, absent supply chain failures or other short-term dislocations. As noted above, in combination with this LCAP, ERCOT should implement a process to expeditiously reimburse any generators whose reasonable, verifiable operating costs exceed the LCAP revenue. There are mechanisms in place today, including the RUC make-whole process, that could be repurposed under these circumstances to ensure that no generators operate at a loss. Once the identifiable factors impeding market response and causing an operational event have subsided, the Commission would terminate the LCAP and return to normal scarcity pricing as soon as possible.

TIEC believes that the Commission should consider replacing the current PNM-based LCAP entirely. However, if the Commission desires to retain a circuit breaker for years when there are sustained high prices caused by a true capacity shortage, the existing PNM trigger and

---

<sup>5</sup> Prior to 2009, ERCOT used a four-step Emergency Electric Curtailments Plan (EECP) rather than the three-level EEA system in place today. A description of the EECP steps is available here: [http://www.ercot.com/content/news/presentations/2007/ERCOT\\_Emergency\\_Procedures\\_\(EECP\)\\_Background.doc](http://www.ercot.com/content/news/presentations/2007/ERCOT_Emergency_Procedures_(EECP)_Background.doc).

<sup>6</sup> Prior to February 2021, ERCOT has instituted rolling blackouts on three occasions: December 22, 1989; April 17, 2006; and February 2, 2011. None of those events resulted in EEA Level 3 (or EECP) notices of longer than 10 hours:

- **12/22/89:** EECP of any level was in effect for 9 hours and 20 minutes between 12/22 and 12/23. EECP Step 4 was in effect for approximately 30 minutes on 12/22. ERCOT Emergency Operation December 21 - 23, 1989 at 4-6 (available at: <https://www.nerc.com/pa/rrm/ea/February%202011%20Southwest%20Cold%20Weather%20Event/ERCOT%20Emergency%20Operation%201989.pdf>).
- **4/17/06:** EECP of any level was in effect for 3 hours and 55 minutes. EECP Step 4 was in effect for 2 hours and 13 minutes. ERCOT Review of April 17, 2006 Emergency Electric Curtailment Event at 6-7 (available at: [http://www.ercot.com/content/meetings/ros/keydocs/2006/0810/4\\_Redacted\\_EECP\\_Event\\_of\\_April\\_17\\_Compliance\\_Report\\_07\\_21\\_2.pdf](http://www.ercot.com/content/meetings/ros/keydocs/2006/0810/4_Redacted_EECP_Event_of_April_17_Compliance_Report_07_21_2.pdf)).
- **2/2/11:** EEA Level 3 was in effect for 8 hours and 18 minutes. ERCOT February 2, 2011 Grid Emergency Events at 8 (available at: [http://www.ercot.com/content/news/presentations/2011/Senate\\_EEA\\_Presentationfinaltg.pdf](http://www.ercot.com/content/news/presentations/2011/Senate_EEA_Presentationfinaltg.pdf)).



the event-based LCAP TIEC has proposed could co-exist. The event-based LCAP would reduce the likelihood that the PNM trigger would be exceeded due to operational events, making it less likely that the LCAP would be imposed outside of operational event as described herein. For example, during last month's weather event, if ERCOT had suspended scarcity pricing after ten hours of EEA 3, PNM would not have reached three times the cost of new entry (CONE) and the LCAP would not have gone into effect.<sup>7</sup> While TIEC does not believe it is necessary to retain both constructs, TIEC is not opposed to that outcome if it is the Commission's preference.

**Question 3. If the Commission amends its rules to adjust the LCAP, when should these adjustments take effect?**

TIEC believes that the Commission should consider implementing a new event-based LCAP through a rule change before June 2021. Ideally, the Commission would restore the HCAP at that time. However, TIEC acknowledges the extreme financial impacts the February event had for many market participants, and is open to other timing for the restoration of the HCAP. The Commission should be aware, however, that keeping the LCAP in place through the summer could create reliability and operational concerns.

### **III. CONCLUSION**

TIEC appreciates the opportunity to provide these comments and looks forward to continuing to work with the Commission and other stakeholders on the many issues raised by last month's winter storm.

---

<sup>7</sup> ERCOT was at EEA 3 for over 24 hours before the PNM threshold was reached. ERCOT entered EEA 3 at 1:20 AM on February 15<sup>th</sup>, and PNM had not yet exceeded the LCAP threshold when the Commission issued its order suspending the LCAP on the morning of February 16<sup>th</sup>. See ERCOT Review of February 2021 Extreme Cold Weather Event at 11 (available at: [http://www.ercot.com/content/wcm/lists/226521/Texas\\_Legislature\\_Hearings\\_2-25-2021.pdf](http://www.ercot.com/content/wcm/lists/226521/Texas_Legislature_Hearings_2-25-2021.pdf)); Docket No. 51617, Second Order Directing ERCOT to Take Action and Granting Exception to Commission Rules at 2 (Feb. 16, 2021) ("ERCOT has informed the Commission that generator revenues *are approaching* the peaker net margin (PNM) threshold . . .") (emphasis added); see also ERCOT PNM Calculations (available at: <http://mis.ercot.com/misapp/GetReports.do?reportTypeId=12348&reportTitle=Peaker%20Net%20Margin&showHTMLView=&mimicKey>).

Respectfully submitted,

THOMPSON & KNIGHT LLP

/s/ Michael McMillin

Phillip G. Oldham

State Bar No. 00794392

Katherine L. Coleman

State Bar No. 24059596

Michael McMillin

State Bar No. 24088034

98 San Jacinto Blvd., Suite 1900

Austin, Texas 78701

(512) 469.6100

(512) 469.6180 (fax)

**ATTORNEYS FOR TEXAS INDUSTRIAL  
ENERGY CONSUMERS**

**TIEC's Proposed Replacement for Rule 25.505(g)**

- (g) **Scarcity pricing mechanism (SPM).** ERCOT will administer the SPM. The SPM will operate as follows:
- (1) **HCAP.** The high system-wide offer cap (HCAP) will be \$9,000 per MWh and \$9,000 per MW per hour. The system-wide offer cap shall equal the HCAP unless the commission, by order, has declared that the low system-wide offer cap (LCAP) is in effect.
  - (2) **LCAP.** The low system-wide offer cap (LCAP) will be \$2,000/MWh and \$2,000 per MW per hour. The system-wide offer cap shall equal the LCAP during any period that the commission has ordered the LCAP to take effect.
    - (A) The commission may order ERCOT to apply the LCAP if the following conditions are met:
      - (i) Energy Emergency Alert Level 3 has been in effect for at least 10 hours in a 48-hour period and is reasonably anticipated to continue or recur in the near-term; and
      - (ii) One or more identifiable market disruptions are preventing a significant portion of the market from effectively responding to price incentives. An identifiable market disruption would include, but is not limited to, major storms, natural disasters, or other catastrophic events, widespread supply chain failures, widespread fuel shortages, physical or virtual attacks on the ERCOT system, or similar *force majeure* circumstances.
    - (B) The commission shall terminate an order applying the LCAP as soon as practicable upon reasonably determining that the market disruption(s) described identified pursuant to paragraph (2)(ii), above, have subsided and the system has appropriately recovered.
  - (5) **Value of Lost Load (VOLL).** VOLL shall equal the system-wide offer cap in effect.
  - (6) **Reimbursement for Operating Losses During an LCAP Event.** ERCOT shall implement a process for reimbursing generation owners for any actual marginal costs, plus a reasonable margin to incentivize performance, in excess of LCAP revenues. ERCOT shall utilize existing settlement processes to the extent possible to verify the generator's costs and expedite reimbursement. Reimbursement shall include a margin on the generator's actual cost to incentivize performance during an LCAP event.